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(54) **METHOD AND SYSTEM FOR PROCESSING ELECTRONIC CHECKS**

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G06Q 20/04 (2012.01)
G06Q 40/02 (2012.01)

(52) **U.S. Cl.**
CPC ***G06Q 20/042*** (2013.01); ***G06Q 20/0425*** (2013.01); ***G06Q 40/02*** (2013.01)

(58) **Field of Classification Search**
CPC G06Q 40/00
USPC 705/35–45
See application file for complete search history.

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(57) **ABSTRACT**

In one embodiment, software is operable to identify checking account information from a repository, with the checking account information associated with a transaction. The software automatically generates an electronic check image based, at least in part, on the transaction and the identified checking account information. The software is then operable to communicate the electronic check image to a bank of first deposit for deposit.

19 Claims, 3 Drawing Sheets

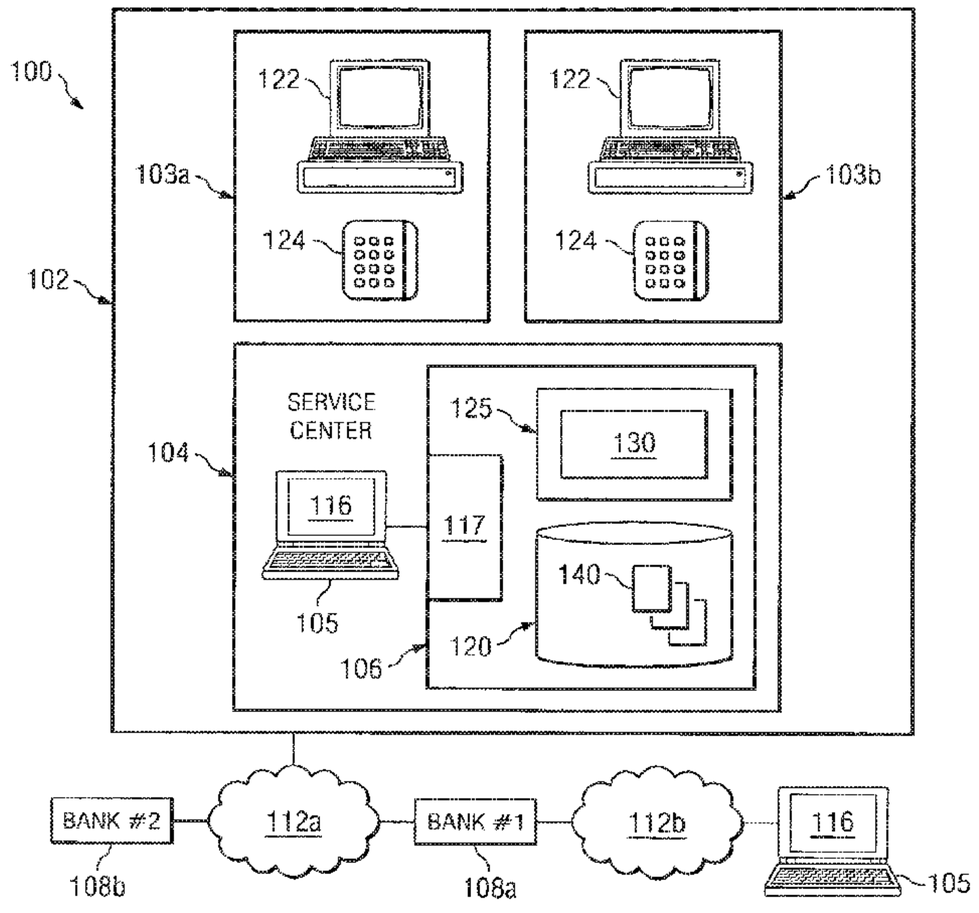

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FIG. 1

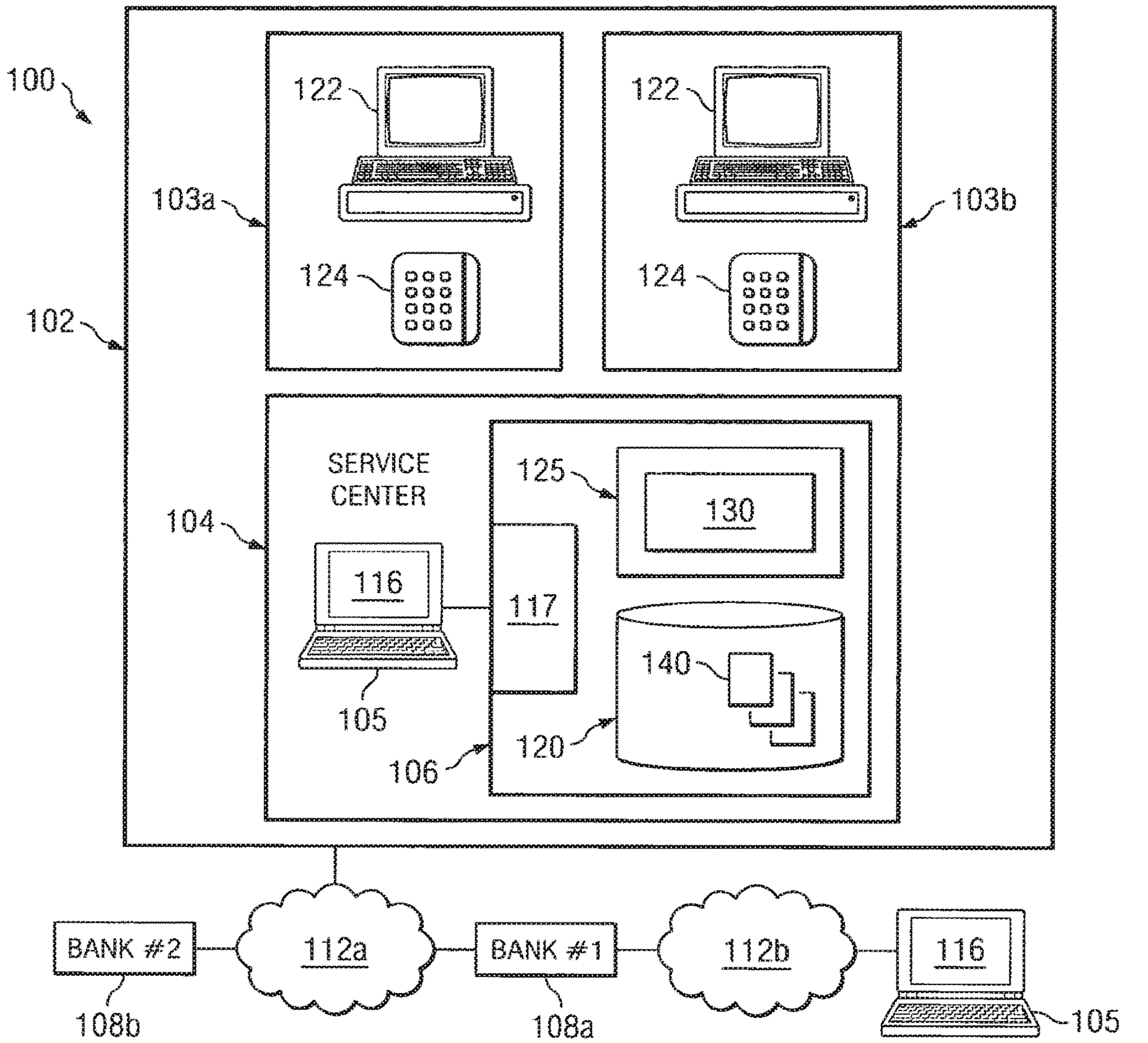
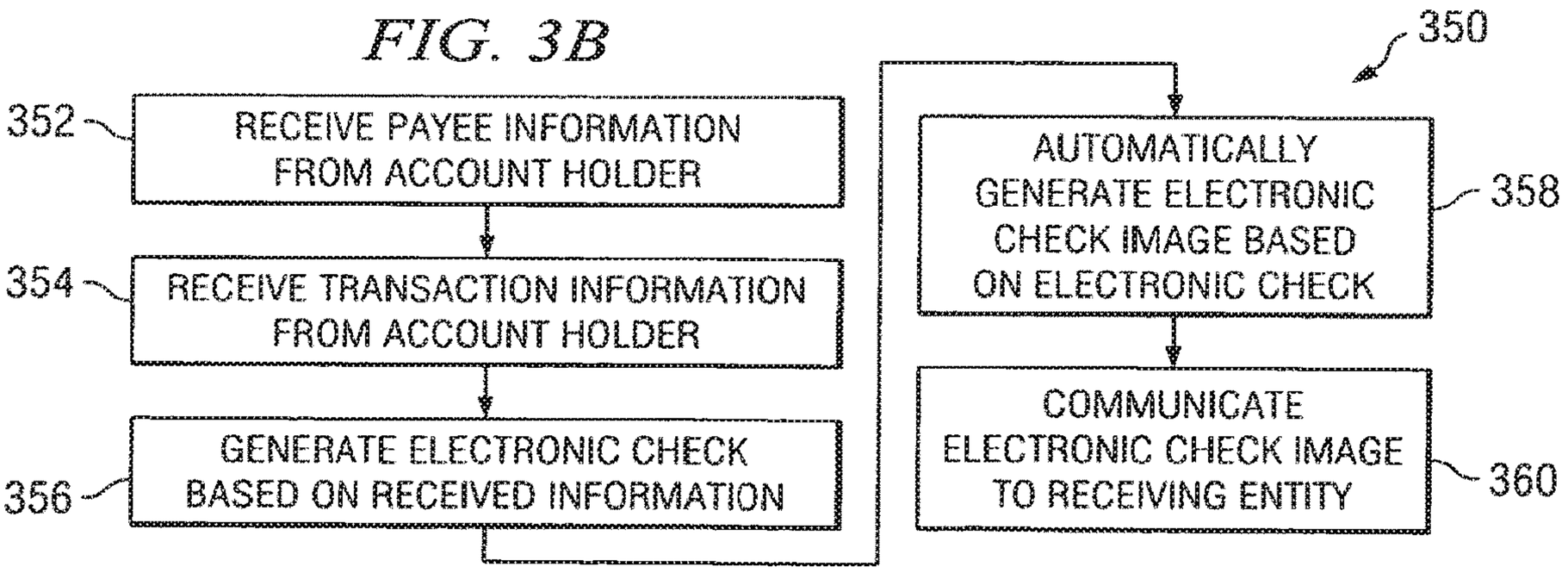

100
102
122
103a
124
122
103b
124
SERVICE CENTER
104
125
130
116
117
105
140
120
106
BANK #2
112a
BANK #1
112b
116
108b
108a
105

FIG. 3B


352
RECEIVE PAYEE INFORMATION FROM ACCOUNT HOLDER
354
RECEIVE TRANSACTION INFORMATION FROM ACCOUNT HOLDER
356
GENERATE ELECTRONIC CHECK BASED ON RECEIVED INFORMATION
350
AUTOMATICALLY GENERATE ELECTRONIC CHECK IMAGE BASED ON ELECTRONIC CHECK
358
COMMUNICATE ELECTRONIC CHECK IMAGE TO RECEIVING ENTITY
360

140

RETAIL ACCOUNT NUMBER	NAME	ADDRESS	CHECKING ACCOUNT NUMBER	ABA R/T	LAST CHECK NUMBER	SIGNATURE ON FILE?	...
1234	JOHN SMITH	123 MAPLE	567813	18563820	5001	Y	...
2468	MARY JONES	7031 MAIN	478241	96998157	7500	N	...
9843	NICOLE ANDERSON	3627 LOVERS	374639	46106002	8127	Y	...
...	...	...	...	...	...	...	...

FIG. 2

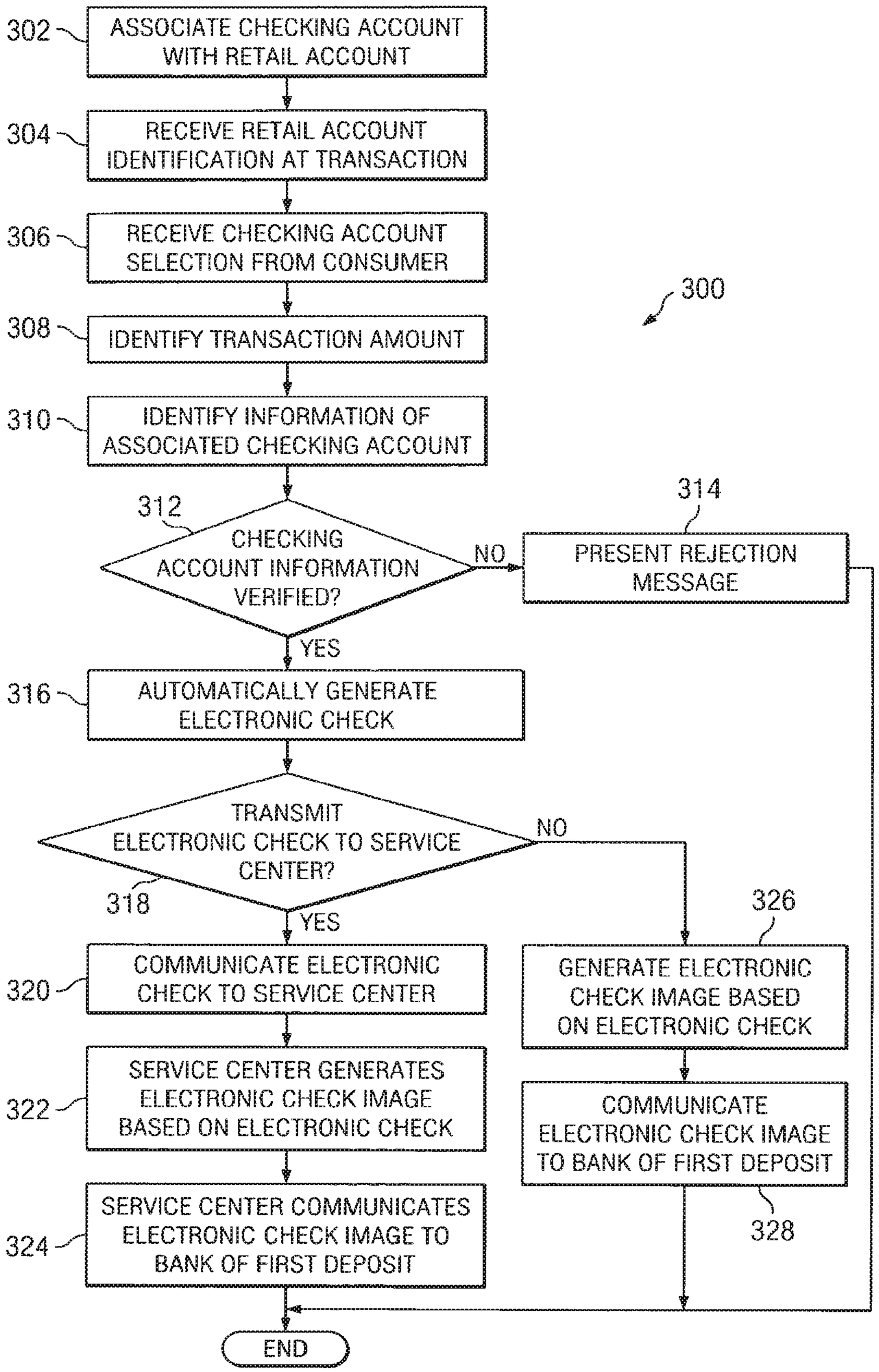

300
302
ASSOCIATE CHECKING ACCOUNT WITH RETAIL ACCOUNT
304
RECEIVE RETAIL ACCOUNT IDENTIFICATION AT TRANSACTION
306
RECEIVE CHECKING ACCOUNT SELECTION FROM CONSUMER
308
IDENTIFY TRANSACTION AMOUNT
310
IDENTIFY INFORMATION OF ASSOCIATED CHECKING ACCOUNT
312
CHECKING ACCOUNT INFORMATION VERIFIED?
NO
314
PRESENT REJECTION MESSAGE
YES
316
AUTOMATICALLY GENERATE ELECTRONIC CHECK
TRANSMIT ELECTRONIC CHECK TO SERVICE CENTER?
NO
318
YES
320
COMMUNICATE ELECTRONIC CHECK TO SERVICE CENTER
322
SERVICE CENTER GENERATES ELECTRONIC CHECK IMAGE BASED ON ELECTRONIC CHECK
324
SERVICE CENTER COMMUNICATES ELECTRONIC CHECK IMAGE TO BANK OF FIRST DEPOSIT
326
GENERATE ELECTRONIC CHECK IMAGE BASED ON ELECTRONIC CHECK
COMMUNICATE ELECTRONIC CHECK IMAGE TO BANK OF FIRST DEPOSIT
328
END

FIG. 3A

METHOD AND SYSTEM FOR PROCESSING ELECTRONIC CHECKS

CROSS-REFERENCE TO RELATED APPLICATION

This application is a continuation of and claims priority to U.S. application Ser. No. 13/857,577, filed on Apr. 5, 2013, which is a continuation of and claims priority to U.S. application Ser. No. 10/925,713, filed on Aug. 25, 2004, the entire disclosure of which is incorporated herein by reference.

TECHNICAL FIELD

This disclosure relates to check processing and, more specifically, to a method and system for processing electronic checks.

BACKGROUND

Currently, a consumer may pay a retailer or other receiving entity with an electronic check for goods or services. This electronic check may then be considered a replacement for or an alternative to a physical check drafted by the consumer. For example, the consumer may initiate the transaction through his bank using financial software. The consumer's bank prints a paper copy of the electronic check, which includes the payee, amount, and check number (as well as other information), for transfer to the receiving entity. The bank then mails or otherwise physically transmits the printed copy to the expected receiving entity. In another example, the consumer may establish an electronic draft from his bank to a retailer. Upon a purchase by the consumer, the retailer communicates the relevant information to a clearing house, which then prints the paper check for transmission to a bank of first deposit. Regardless of the technique, a printed or physical representation of the electronic check are used to deposit the check and normally include a "signature on file" mark in place of the consumer's physical signature.

SUMMARY

This disclosure provides a system and method for processing electronic checks. In one embodiment, for example, software is operable to identify checking account information from a repository, with the checking account information associated with a transaction. The software automatically generates an electronic check image based, at least in part, on the transaction and the identified checking account information. The software is then operable to communicate the electronic check image to a bank of first deposit for deposit.

The details of various embodiments of the disclosure are set forth in the accompanying drawings and the description below. One or more embodiments of the disclosure may include several important technical advantages. For example, the disclosure may allow a receiving entity (or other retail organization or corporation) to process retail transactions without the need for consumer's physical checks or paper representations of electronic checks. Continuing this example, this disclosure may enable the receiving entity to electronically deposit checks or similar retail payments without the need for paper. In other words, the present disclosure may provide the receiving entity with the ability to reduce or eliminate the need for physical checks from the retail transaction through the deposit process, thereby possibly expediting the deposit of the funds from the transaction. In yet another example, the consumer may quickly transact with a retailer through a courtesy card and yet receive a check image, often with a check number, with his bank statement. Of course, certain embodiments of the disclosure may have none, some or all of these advantages. Other features, objects, and advantages of the disclosure will be apparent from the description and drawings, as well as from the claims.

DESCRIPTION OF DRAWINGS

FIG. **1** illustrates a system for depositing electronic check images in accordance with one embodiment of the present disclosure;

FIG. **2** is an example table storing checking account information in accordance with one embodiment of the present disclosure; and

FIGS. **3**A-B are flowcharts illustrating example methods for processing electronic checks in accordance with one embodiment of the present disclosure.

DETAILED DESCRIPTION

FIG. **1** illustrates a system **100** for processing and depositing electronic check images in accordance with one embodiment of the present disclosure. Generally, system **100** includes at least a portion of any retail system operable to process electronic retail transactions, automatically generate at least one electronic check image (often associated with an image replacement document or IRD) from the transaction, and communicate the electronic check image to a bank of first deposit or other financial institution **108**. As used herein, an electronic check image may be a digital image of an electronic check, or a file including the image and other information, including the front, the back, both, or any suitable portion thereof. This digital image may not be based on a physical check, but may instead be populated, created, imaged, or otherwise generated based on data from an electronic checking transaction. This check image may be in any suitable format including Moving Picture Experts Group (MPEG), Joint Photographic Experts Group (JPEG), Tag Image File Format (TIFF), including any suitable version thereof (such as TIFF 6.0), and others. The term "dynamically" generally means that certain processing is determined, at least in part, at run-time based on one or more variables. The term "automatically," as used herein, generally means that the appropriate processing is substantially performed by at least part of system **100**. It should be understood that "automatically" further contemplates any suitable user or manager interaction with system **100** without departing from the scope of this disclosure.

System **100** is typically distributed into at least one receiving entity (or point-of-sale) **102** and at least one financial institution **108**. Often, portions of system **100** are electronically inter-coupled, thereby allowing efficient communications among the various components. Generally, financial institution **108** is any agent, third-party resource, clearing house, branch, processing center, or central office of a bank of first deposit or other similar financial institution. Indeed, while illustrated as two banks, first financial institution **108***a* and second financial institution **108***b* respectively, any number of banks and/or other institutions may be included in system **100** without departing from the scope of

this disclosure. Moreover, two or more financial institutions **108** may represent two or more ABA routing/transit numbers associated with one bank.

As illustrated, system **100** also includes one or more receiving entities **102**. Receiving entity **102** is any organization or person, including a corporation, a privately owned store, an online vendor, a telephony system, outside representative or agent, a local or remote automated teller machine (ATM), or other original recipient, point-of-sale, or location operable to at least partially transact through electronic checks. Receiving entity **102** may also represent a teller at one of the financial institutions **108** without departing from the scope of the disclosure. Receiving entity **102** may also be operable to generate an Automated Clearing House (ACH) transaction based on the retail transaction for quickly processing the transaction with financial institutions **108**. Regardless, at any appropriate time and using any suitable automatic or manual technique, receiving entity **102** is normally operable to generate electronic check images based on electronic transactions and deposit these electronic check images with any appropriate financial institution **108**. In the illustrated embodiment, receiving entity **102** includes two stores, **103***a* and **103***b* respectively, and a service center **104**. But it will be understood that receiving entity **102** may include none, one, or both (as well as other) components without departing from the scope of this disclosure. In other words, receiving entity **102** may be considered a merged point-of-receipt **103** and service center **104** and reference to point-of-receipt **103** and service center **104** is meant to include a singular or standalone receiving entity **102** as appropriate.

Point-of-receipt **103** is any person or entity that receives information associated with electronic checks. For example, point-of-receipt **103** may be a store, an ATM, a hospital, and others. In certain embodiments, point-of-receipt **103** may be operable to generate electronic check images and communicate encrypted or unencrypted electronic check images to a service center **104**. Illustrated first point-of-receipt **103***a* includes an electronic cash register (ECR) **122** for receiving and storing physical checks. ECR **122** may be operable to generate electronic check images from scanned physical checks upon receipt. Of course, receiving entity **102** may include other additional or alternative components for processing transactions. For example, point-of-receipt **103** may include one or more card readers **124**. Card reader **124** is any suitable device operable to capture or otherwise obtain information from a consumer via, for example, his retail or courtesy card, a key card, a drivers license, and such. For example, card reader **124** may be a scanner, a key card reader, an automated teller machine (ATM), a debit or credit card machine, check reader or sorter, or any other similar device (or combination thereof) that can at least partially process a retail transaction or identify checking account information (such as through a retail courtesy account). Card reader **124** may also be operable to receive an electronic signature or scan a physical signature for insertion into the particular electronic check image. In certain embodiments, card reader **124** may be further operable to generate the electronic check images based on the received or identified information.

Example service center **104** is any office, agent, department, data processing center, or other entity or computer operable to provide centralized or managed processing of electronic check image from a plurality of points-of-receipt **103**. For example, service center **104** may be a corporate headquarters, a regional management office, a designated point-of-receipt **103**, as well as others. Indeed, service center **104** may be unaffiliated with point-of-receipt **103**, such as comprising an outsourced data processing organization, without departing from the scope of the disclosure. Moreover, any or all points-of-receipt **103** may act or be operable to perform as service center **104**. Illustrated service center **104** includes server **106** and computer **105**, but it will be understood that service center **104** may include none, some, as well as other components without departing from the scope of this disclosure.

Server **106** includes memory **120** and processor **125** and comprises an electronic computing device operable to receive, transmit, process, and store data associated with system **100** and, more specifically, receiving entity **102**. For example, server **106** may be any computer or processing device such as, for example, a blade server, general-purpose personal computer (PC), Macintosh, workstation, a mainframe, or any other suitable device. Generally, FIG. **1** provides merely one example of servers or computers that may be used with the disclosure. For example, although FIG. **1** illustrates one server **106** that may be used with the disclosure, system **100** can be implemented using computers other than servers, as well as a server pool. In other words, the present disclosure contemplates computers other than general purpose computers as well as computers without conventional operating systems. As used in this disclosure, the term "computer" is intended to encompass a personal computer, workstation, network computer, or any other suitable processing device. Server **106** may be adapted to execute any operating system including Linux, UNIX, Windows Server, or any other suitable operating system. According to one embodiment, server **106** may also include or be communicably coupled with a web server and/or a secure financial server.

Memory **120** may include any memory or database module and may take the form of volatile or non-volatile memory including, without limitation, magnetic media, optical media, random access memory (RAM), read-only memory (ROM), removable media, or any other suitable local or remote memory component. In the illustrated embodiment, memory **120** includes one or more retail account tables **140**, but memory **120** may include any appropriate data such as audit information, administration profiles, MICR codes, one or more hash values, an all-items file, and others.

Retail account table **140** includes information associated with a plurality of retail and/or checking accounts, typically provided by a consumer through a paper or online application process. In one embodiment, retail account table **140** may be a temporary file or other data structure used for efficiently associating retail account information with checking account information. In an alternative embodiment, retail account table **140** may be a persistent file used for collecting or storing checking account information such as checking account holder, check account number, and a unique identifier (driver's license number, retail account number, etc.). For example, memory **120** may store checking account information in a relational database, typically including tables defined using SQL statements and interrelated using schemas. In this example, one table may store checking account information and another table may store retail account information. In another example, memory **120** may store checking account information in one or more comma-separated-values (CSV) files, run-time parameters, XML documents, Virtual Storage Access Method (VSAM) files, Btrieve files, text files, encrypted files, object-oriented database data structures, and others.

Server **106** also includes processor **125**. Processor **125** executes instructions and manipulates data to perform the operations of server **106** such as, for example, a central processing unit (CPU), a blade, an application specific integrated circuit (ASIC), or a field-programmable gate array (FPGA). Although FIG. **1** illustrates a single processor **125** in server **106**, multiple processors **125** may be used according to particular needs and reference to processor **125** is meant to include multiple processors **125** where applicable. In the illustrated embodiment, processor **125** executes image processing engine **130**, which performs or executes various check processes such as, for example, techniques described in FIGS. **3**A-B.

Image processing engine **130** could include any hardware, software, firmware, or combination thereof operable to, among other things, automatically generate electronic check images from electronic checking transactions. For example, image processing engine **130** may be written or described in any appropriate computer language including C, C++, Java, Perl, Visual Basic, assembler, any suitable version of 4GL, and others or any combination thereof. It will be understood that while image processing engine **130** is illustrated in FIG. **1** as a single multi-tasked module, the features and functionality performed by this engine may be performed by multiple modules such as, for example, an image generation module, a deposit processing module, and an administration module. Further, while illustrated as internal to server **106**, one or more processes associated with image processing engine **130** may be stored, referenced, accessed, or executed remotely (such through electronic check register **122** and/or card reader **124**). Moreover, image processing engine **130** may be a child or sub-module of another software module (not illustrated) without departing from the scope of this disclosure. In one embodiment, image processing engine **130** may include in or be communicably coupled with a computer **105** or graphical user interface (GUI) **116**.

Computer **105** may include any computing device operable to present information to a user such as at point-of-receipt **103** or at home. While not illustrated, computer **105** (as well as ECR **122** or card reader **124**) may also include, execute, or present a portion or a version of image processing engine **130** (illustrated in server **106**) for performing or implementing depositing or other check processing without departing from the scope of the disclosure. For example, local image processing engine **130** may collect or otherwise identify electronic check images for communication to service center **104** or depositing to financial institution **108**. In another example, computer **105** may allow an administrator to log-on to image processing engine **130**, monitor a communication of images, communicate the images via an included or referenced file transfer program such as secure FTP. Regardless, computer **105** may be a computer that includes an input device, such as a keypad, touch screen, mouse, or other device that can accept information, and an output device that conveys information associated with the operation of server **106**, financial institutions **108**, or receiving entities **102**, as appropriate. Both the input device and output device may include fixed or removable storage media such as a magnetic computer disk, CD-ROM, or other suitable media to both receive input from and provide output to users through the display, namely GUI **116**.

GUI **116** comprises a graphical user interface operable to allow the user of the workstation to interface with at least a portion of system **100** for any suitable purpose. Generally, GUI **116** provides the user of computer **105** with an efficient and user-friendly presentation of data provided by or communicated within system **100**. GUI **116** may comprise a plurality of customizable frames or views having interactive fields, pull-down lists, and buttons operated by the user. In one embodiment, GUI **116** presents reports that includes the various electronic check information and associated buttons and receives commands from the user via one of the input devices. Moreover, it should be understood that the term graphical user interface may be used in the singular or in the plural to describe one or more graphical user interfaces and each of the displays of a particular graphical user interface. Therefore, GUI **116** contemplates any graphical user interface, such as a generic web browser or touch screen, that processes information in system **100** and efficiently presents the results to the user. Server **106** can accept data from computer **105** via the web browser (e.g., Microsoft Internet Explorer or Netscape Navigator) and return the appropriate HTML or XML responses using network **112**.

Server **106** may also include interface **117** for communicating with other computer systems or components, such as another server **106** or receiving entity **102**, over network **112** in a client-server or other distributed environment. In certain embodiments, server **106** receives electronic check information or retail account data from internal or external senders through interface **117** for storage in memory **120** and/or processing by processor **125**. Generally, interface **117** comprises logic encoded in software and/or hardware in a suitable combination and operable to communicate with network **112**. More specifically, interface **117** may comprise software supporting one or more communications protocols associated with communications network **112** or hardware operable to communicate physical signals.

Network **112** facilitates wireless or wireline communication between computer servers **106** and any other local or remote computer or component, such as all or a portion of a bank posting systems or other intermediate systems. While illustrated as two networks, **112***a* and **112***b* respectively, network **112** may be a continuous network without departing from the scope of this disclosure, so long as at least portion of network **112** may facilitate communications between the requisite parties or components. In other words, network **112** encompasses any internal or external network, networks, sub-network, or combination thereof operable to facilitate communications between various computing components in system **100**. Network **112** may communicate, for example, Internet Protocol (IP) packets, Frame Relay frames, Asynchronous Transfer Mode (ATM) cells, voice, video, data, and other suitable information between network addresses. Network **112** may include one or more local area networks (LANs), radio access networks (RANs), metropolitan area networks (MANs), wide area networks (WANs), all or a portion of the global computer network known as the Internet, and/or any other communication system or systems at one or more locations.

In one aspect of operation of certain embodiments, point-of-receipt **103** is involved in a retail transaction with a consumer. Point-of-receipt **103** receives retail account information from the consumer, such as through card reader **124**. Point-of-receipt **103** communicates this retail account information to server **106**, which often resides at service center **104**. Image processing engine **130** then receives retail account information from point-of-receipt **103** and identifies the associated checking account information for the consumer using, for example, retail account table **140**. In certain embodiments, card reader **124** further communicates information associated with the retail transaction to server **106**. Image processing engine **130** then performs any suitable processing using the transaction information in the identified checking account information. For example, image process-

ing engine **130** may verify that the consumer's checking account has sufficient funds for the transaction. In another example, image processing engine **130** may verify account status, such as holds, open or closed, and others. Based on this verification processing, image processing engine **130** may reject the transaction or accept or process the transaction. Returning to the insufficient funds example, receiving entity **102** may deny the transaction or may accept, process, present, or otherwise handle a known or suspected "non-sufficient" transaction as appropriate.

Once the appropriate processing (if any) has been completed, image processing engine **130** automatically generates an electronic check image using the identified checking account information and the transaction information. For example, image processing engine **130** may populate the electronic check image with the ABA routing/transit number, the checking account number, the bank name, the payee name, the checking account holders name, and other check information. In another example, image processing engine **130** may load a default electronic check image and populate the remaining fields using the identified transaction information. Image processing engine **130** may insert a "signature on file" tag into the signature field of the electronic check image, possibly received during retail account enrollment. Alternatively, image processing engine **130** may request an electronic signature during the transaction, which is then inserted into the electronic check image. Moreover, image processing engine **130** may automatically determine the check number for this electronic check image based on the identified checking account information. For example, image processing engine **130** may retrieve a last check number for the checking account from retail account table **140** and increment this number by one for use in the check image. In another example, image processing engine **130** may request the next electronic check number from the appropriate financial institution **108**. In certain embodiments, this check number may be selected from among a subset of checks assigned to, selected by, or otherwise associated with retail entity **102**. Once all the appropriate check information has been gathered, collected, or otherwise identified, image processing engine **130** populates a data structure to be used in the electronic check image generation. As described above, this electronic check image may be operable to print or otherwise generate an image replacement document. In certain embodiments, once the electronic check image has been suitably generated, image processing engine **130** then deposits this electronic check image without a physical representation of the check at any point during that transaction. For example, image processing engine **130** may generate an electronic deposit including one or more electronic check images for communication to the appropriate financial institution **108**.

FIG. **2** is a diagram illustrating an example retail account table **140** in accordance with one embodiment of the present disclosure. In general, system **100** may use retail account table **140** to store and process objects from the queries. In the illustrated embodiment, retail account table **140** is a multi-dimensional data structure that includes at least a plurality of account records. Each record includes multiple example columns. In this example, each record includes a retail account number, a name, an address, a checking account number, ABA routing/transit number, a last check number, and a "signature on file" switch (which may be used to indicate whether an electronic signature is required during the transaction). It will be understood that the illustrated fields are for example purposes only and one or more these fields may not be in retail account table **140** without departing from the scope of this disclosure. In one embodiment, the account record may include a link to another table, such as, for example, a purchase history table. Moreover, retail account table **140** may be separated into multiple tables without departing from the scope of the disclosure. In one embodiment, retail account table **140** is coupled with or referenced by two data structures or objects: a retail account data structure and checking account data structure. In other words, the illustrated retail account table **140** is merely to aid understanding and may not represent certain embodiments, formats, or data structures within the scope of this disclosure.

FIGS. **3**A-B are flowcharts illustrating example methods, **300** and **350** respectively, for depositing electronic check images at a retail level, such as receiving entity **102**, in accordance with one embodiment of the present disclosure. At a high level, method **300** includes image processing engine **130** gathering checking account information based on a retail transaction, automatically generating an electronic check image based on this information, and depositing the image; whereas method **350** includes generating an electronic check image at a financial institution **108** based on user input at computer **105**. The following descriptions focus on the operation of image processing engine **130** in performing these methods. But system **100** contemplates using any appropriate combination and arrangement of logical elements implementing some or all of the described functionality. Indeed, while described as at least partially occurring at a retail level store, method **300** may be performed at any appropriate location such as, for example, at an ATM or other standalone receiving entity **102** or financial institution **108**, as illustrated by method **350**.

Method **300** begins at step **302**, where receiving entity **102** associates a checking account with a retail account. For example, a customer may include the checking account information in an online or paper application for a new retail account associated with receiving entity **102**. The retail account may be a discount plan, a courtesy account, a frequent buyer account, or any other retail or marketing association. Part of this application process may include the consumer putting his signature on file, providing a blank or voided check to receiving entity **102**, and any other suitable tasks. Typically, receiving entity **102** stores this checking account information in retail account table **140**. But it will be understood that the checking information may be stored in any appropriate repository such as, for example, a secure server or data center, a dedicated computer, and others. Once approved or otherwise accepted, receiving entity **102** may generate or identify a unique identifier for the consumer (or his family, organization, or business). For example, receiving entity **102** may provide a retail account number, such as a retail courtesy card, to the consumer. In another example, receiving entity **102** may use the consumer's driver's license number, social security number, checking account number, or any other unique or substantially unique identifier.

At this or at any subsequent time, the consumer may then buy or pay for good or services (or perform any other suitable electronic checking transaction) through receiving entity **102**. Accordingly, at step **304**, point-of-receipt **103** receives a retail account identification from the consumer during the particular transaction. For example, the consumer may swipe a retail account card at checkout. In another example, the consumer may present with his driver's license, which point-of-receipt **103** then uses to locate the retail account. Typically, the consumer is then presented with various payment options, such as checking, credit card, cash, and others. Point-of-receipt **103** then receives a selec-

tion indicating that the consumer is paying through his checking account at step **306**. At step **308**, point-of-receipt **103** identifies the particular transaction amount. Next, point-of-receipt **103** identifies checking account information associated with the particular retail account at step **310**. For example, point-of-receipt **103** may communicate the retail account identifier, which was identified earlier, to service center **104** for identification of the checking account information. In certain embodiments, receiving entity **102** may verify the checking account information, as indicated at decisional step **312**. This verification may include verifying the ABA routing/transit number, verifying account status (holds, open, and such), verifying that there is sufficient funds in the account to cover the transaction (such as through the ABA routing/transit number and checking account number), and any other suitable verification or authentication. If the checking account is not verified, then point-of-receipt **103** may present a rejection message to the consumer at step **314**. Otherwise, receiving entity **102** automatically generates an electronic check at step **316**. It will be understood that generation of the electronic check may merely be the population of a temporary data structure, creation of an ACH transaction, or any other suitable process. Moreover, in certain embodiments or based on particular criteria, point-of-receipt **103** may continue to process an unverified or invalidated transaction as appropriate.

Once point-of-receipt **103** has collected or identified the appropriate information, it determines if it should transmit the electronic check information to service center **104** at decisional step **318**. If point-of-receipt **103** is to transmit electronic check information to the service center **104** at step **320**, then service center **104** generates an electronic check image based on the electronic check information at step **322**. As indicated above, the generation of the electronic check image may include identifying one or more fields within a data structure and populating the electronic check image with the identified fields. Next, service center **104** communicates the generated electronic check image to a bank of first deposit or other financial institution **108** at step **324**. Returning to decisional step **318**, if point-of-receipt **103** is operable to directly deposit with financial institution **108**, then it generates an electronic check image based on the electronic check information at step **326**. As indicated above, the generation of the electronic check image may include identifying one or more fields within a data structure and populating the electronic check image with the identified fields. Next, point-of-receipt communicates the generated electronic check image to a bank of first deposit or other financial institution **108** at step **328**. Part of this communication may include an electronic deposit ticket or header record, often automatically generated.

Method **350** illustrates an alternative technique for receiving entity **102** to process an electronic check image for a particular transaction. In this embodiment, the consumer sends an electronic check to receiving entity **102** through financial institution **108**. This electronic check would typically be in the form of an electronic check image generated by financial institution **108** from electronic checking information. For example, method **350** begins at step **352**, where financial institution **108** receives payee information from a particular checking account holder. For example, financial institution **108** may receive the payee information via a web site, financial software, a telephony system, or any other system. In the illustrated embodiment, the consumer may use computer **105** to transmit the desired information to financial institution **108**. Next, financial institution **108** receives transaction information from the checking account holder at step **354**. For example, this transaction information may include a check date, a transaction amount, and others. At step **356**, financial institution **108** automatically generates an electronic check based on the received information. As above, this electronic check may be a temporary data structure, a file, an ACH transaction, or any other appropriate logical component. Using the generated electronic check, financial institution **108** generates an electronic check image, in any particular format, based on the identified electronic check information at step **358**. Next, financial institution **108** communicates the electronic check image to the payee, illustrated as receiving entity **102**, at step **360**. At any appropriate point, receiving entity **102** may then deposit the electronic check image using any appropriate technique.

The preceding flowcharts and accompanying descriptions illustrate exemplary methods **300** and **350**. In short, system **100** contemplates using any suitable technique for performing this and other tasks. Accordingly, many of the steps in these flowcharts may take place simultaneously and/or in different orders than as shown. Moreover, system **100** may use methods with additional steps, fewer steps, and/or different steps, so long as the methods remain appropriate.

Although this disclosure has been described in terms of certain embodiments and generally associated methods, alterations, and permutations of these embodiments and methods will be apparent to those skilled in the art. For example, techniques similar to those illustrated may be substantively performed at a cash register. In another example, the receiving entity may use a driver's license or other similar unique identifier to automatically associate checking account information with a particular transaction. Accordingly, the above description of example embodiments does not define or constrain this disclosure. Other changes, substitutions, and alterations are also possible without departing from the scope of this disclosure.

What is claimed is:

1. A computer-implemented method executed by at least one processor, the method comprising:

identifying transaction data associated with a financial transaction associated with a payee, a payor, and an amount, wherein the financial transaction is not associated with a checking account;

receiving a unique account identifier associated with the payor and provided in association with the financial transaction, wherein the unique account identifier is provided during the financial transaction;

searching a database storing a plurality of checking accounts, wherein each checking account is associated with an identifier, and wherein searching the database comprises identifying a particular checking account associated with an identifier corresponding to the received unique account identifier, wherein the particular checking account comprises the payor's checking account;

automatically generating, using an image processing engine, an electronic check image based on the financial transaction and the particular checking account, wherein the electronic check image represents a checking transaction for the amount of the financial transaction from the payor's checking account, wherein the electronic check image is operable to generate an image replacement document, and wherein the electronic check image is not associated with or based on a physical check; and

communicating, via a network, the checking transaction and the electronic check image to a financial institution

for deposit into an account of the payee, wherein the electronic check image is used to complete the financial transaction.

2. The computer-implemented method of claim **1**, wherein the unique account identifier comprises at least one of a driver's license number or a retail account number associated with the payee.

3. The computer-implemented method of claim **1**, wherein generating the electronic check includes:

accessing checking account information associated with the particular checking account;

determining a current unused check number based on the checking account information for electronic checks not associated with physical checks; and

including the current check number in the electronic check image as a check number corresponding to the electronic check image.

4. The computer-implemented method of claim **3**, wherein determining the current check number comprises:

transmitting, via the network, a request to a financial institution associated with the particular checking account for a next unused check number not associated with a physical check; and

receiving, via the network, a response to the request from the financial institution associated with the particular checking account including the next check number, wherein the next check number is used as the current check number.

5. The computer-implemented method of claim **1**, wherein the unique account identifier is a retail account number, wherein the transaction data includes retail account data associated a retail account of the payee, and wherein checking account information associated with the particular checking account is accessed based on the retail account data.

6. The computer-implemented method of claim **5**, the method further comprising accessing the retail account data based on a courtesy card presented by the payee during the financial transaction.

7. The computer-implemented method of claim **1**, wherein the unique account identifier associated with the payor and provided in association with the financial transaction comprises a unique account identifier received via a card reader at a point of sale.

8. The computer-implemented method of claim **1**, wherein each identifier is associated with the corresponding checking account during an online application process.

9. The computer-implemented method of claim **1**, wherein the electronic check image is populated with an ABA routing/transit number, a checking account number of the particular checking account, a bank name associated with the particular checking account, a name of the payee, and a name of a holder of the particular checking account.

10. The computer-implemented method of claim **1**, wherein the unique account identifier is provided during the financial transaction at a checkout process.

11. A system comprising:

at least one processor; and

a non-transitory computer-readable storage medium coupled to the at least one processor and storing programming instructions for execution by the at least one processor, the programming instructions instruct the at least one processor to:

identify transaction data associated with a financial transaction associated with a payee, a payor, and an amount, wherein the financial transaction is not associated with a checking account;

receive a unique account identifier associated with the payor and provided in association with the financial transaction, wherein the unique account identifier is provided during the financial transaction;

search a database storing a plurality of checking accounts, wherein each checking account is associated with an identifier, and wherein searching the database comprises identifying a particular checking account associated with an identifier corresponding to the received unique account identifier, wherein the particular checking account comprises the payor's checking account;

automatically generate, using an image processing engine, an electronic check image based on the financial transaction and the particular checking account, wherein the electronic check image represents a checking transaction for the amount of the financial transaction from the payor's checking account, wherein the electronic check image is operable to generate an image replacement document, and wherein the electronic check image is not associated with or based on a physical check; and

communicate, via a network, the checking transaction and the electronic check image to a financial institution for deposit into an account of the payee, wherein the electronic check image is used to complete the financial transaction.

12. The system of claim **11**, wherein the unique account identifier comprises at least one of a driver's license number or a retail account number associated with the payee.

13. The system of claim **11**, wherein generating the electronic check includes:

accessing checking account information associated with the particular checking account;

determining a current unused check number based on the checking account information for electronic checks not associated with physical checks; and

including the current check number in the electronic check image as a check number corresponding to the electronic check image.

14. The system of claim **13**, wherein determining the current check number comprises:

transmitting, via the network, a request to a financial institution associated with the particular checking account for a next unused check number not associated with a physical check; and

receiving, via the network, a response to the request from the financial institution associated with the particular checking account including the next check number, wherein the next check number is used as the current check number.

15. The system of claim **11**, wherein the unique account identifier is a retail account number, wherein the transaction data includes retail account data associated a retail account of the payee, and wherein checking account information associated with the particular checking account is accessed based on the retail account data.

16. The system of claim **15**, the programming instructions instructing the at least one processor to access the retail account data based on a courtesy card presented by the payee during the financial transaction.

17. The system of claim **11**, wherein the unique account identifier associated with the payor and provided in association with the financial transaction comprises a unique account identifier received via a card reader at a point of sale.

18. A non-transitory, computer-readable medium storing computer-readable instructions executable by a computer and configured to:

identify transaction data associated with a financial transaction associated with a payee, a payor, and an amount, wherein the financial transaction is not associated with a checking account;

receive a unique account identifier associated with the payor and provided in association with the financial transaction, wherein the unique account identifier is provided during the financial transaction;

search a database storing a plurality of checking accounts, wherein each checking account is associated with an identifier, and wherein searching the database comprises identifying a particular checking account associated with an identifier corresponding to the received unique account identifier, wherein the particular checking account comprises the payor's checking account;

automatically generate, using an image processing engine, an electronic check image based on the financial transaction and the particular checking account, wherein the electronic check image represents a checking transaction for the amount of the financial transaction from the payor's checking account, wherein the electronic check image is operable to generate an image replacement document, and wherein the electronic check image is not associated with or based on a physical check; and

communicate, via a network, the checking transaction and the electronic check image to a financial institution for deposit into an account of the payee, wherein the electronic check image is used to complete the financial transaction.

19. The computer-readable medium of claim 18, wherein generating the electronic check includes:

accessing checking account information associated with the particular checking account;

determining a current unused check number based on the checking account information for electronic checks not associated with physical checks; and

including the current check number in the electronic check image as a check number corresponding to the electronic check image.

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